

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated January 30, 2004 has been received and its contents carefully reviewed.

By this Response, Applicants have amended claim 6. No new matter has been added. Applicants kindly acknowledge the allowance of claims 1-5 and 10-20. Claims 1-6 and 8-20 are pending in the application. Reconsideration and withdrawal of the rejections based upon the above amendment and the following remarks are requested.

In the Office Action, claims 6, 8 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's admitted prior art (APA) in view of U.S. Patent No. 4,295,711, issued to Tanaka et al. (hereafter "Tanaka"). Applicants respectfully traverse the rejection because neither APA nor Tanaka, analyzed alone or in combination, teaches or suggests an in-plane switching mode liquid crystal display device that includes, among other features, "a plurality of common voltage lines for applying a common voltage to the thin film transistor array, wherein the common voltage lines provided in an outer area of the thin film transistor array cross the plurality of gate lines and are spaced from the thin film transistor array by a distance greater than or equal to 1 mm to prevent deterioration of liquid crystal generated in said outer area from being diffused into the thin film transistor array," as recited in independent claim 6 of the present application.

The Office Action concedes APA does not disclose "a display wherein the predetermined distance is greater than or equal to 1 mm (claim 6); equal to or greater than 1 mm and less than or equal to 1.5 mm (claim 8); or greater than 1.5 mm (claim 9) to prevent deterioration of liquid crystal generated in said outer area from being diffused into the thin film transistor array." To compensate for the deficiencies of APA, the Office Action relies upon the teachings of Tanaka.

Applicants respectfully note that FIGs. 1 and 2 of Tanaka relate to the electrode terminal spacing of a liquid crystal display device, not to leads or conductor lines. As such, Applicants submit Tanaka fails to teach any subject matter regarding the spacing of common voltage lines and the thin film transistor array as recited in the present application. Specifically, Tanaka fails to teach or suggest "wherein the common voltage lines provided in an outer area of the thin film transistor array cross the plurality of gate lines and are spaced from the thin film transistor array by a distance greater than or equal to 1 mm to prevent deterioration of liquid crystal generated in

said outer area from being diffused into the thin film transistor array,” as recited in independent claim 6 of the present application. Further, Tanaka fails to teach or suggest “wherein the distance is in a range of equal to or greater than 1 mm and less than or equal to 1.5 mm,” as recited in dependent claim 8, and “wherein the distance is greater than 1.5 mm,” as recited in dependent claim 9. Accordingly, Tanaka fails to remedy the deficiencies of APA and independent claim 6 and its dependent claims 8 and 9 are allowable over the applied combination of APA and Tanaka. Reconsideration and withdrawal of the rejection are requested.

In the Office Action, claims 6, 8 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants’ Admitted Prior Art (APA) in view of U.S. Patent No. 5,151,689, issued to Kabuto et al. (hereafter “Kabuto”). Applicants respectfully traverse the rejection because neither APA nor Kabuto, analyzed alone or in any combination, teaches or suggests the combined features recited in the claims of the present application. For example, APA and Kabuto fail to teach or suggest an in-plane switching mode liquid crystal display device that includes, among other features, “a plurality of common voltage lines for applying a common voltage to the thin film transistor array, wherein the common voltage lines provided in an outer area of the thin film transistor array cross the plurality of gate lines and are spaced from the thin film transistor array by a distance greater than or equal to 1 mm to prevent deterioration of liquid crystal generated in said outer area from being diffused into the thin film transistor array,” as recited in independent claim 6 of the present application.

The Office Action concedes that “APA does not explicitly disclose a display wherein the predetermined distance is greater than or equal to 1 mm (claim 6); equal to or greater than 1 mm and less than or equal to 1.5 mm (claim 8); or greater than 1.5 mm (claim 9) to prevent deterioration of liquid crystal generated in said outer area from being diffused into the thin film transistor array.” To compensate for the deficiencies of APA, the Office Action relies upon FIG. 21 and column 11, line 62 - column 12, line 42 of Kabuto.

Applicants respectfully submit Figure 21 of Kabuto does not depict an in-plane switching mode liquid crystal display device having the structure recited in the claims of the present invention. In particular, Kabuto discloses a structure to prevent the deterioration of liquid crystal in which the “electrode 56 is formed on the vertical scanning function part 43,” opposite the common electrode 54 (see, col. 12, lines 5- 14). Further, Applicants submit Kabuto fails to teach

or suggest the relationship between the common voltage lines and the thin film transistor array recited in the claims of the present invention. Specifically, Kabuto fails to teach or suggest “wherein the common voltage lines provided in an outer area of the thin film transistor array cross the plurality of gate lines and are spaced from the thin film transistor array by a distance greater than or equal to 1 mm to prevent deterioration of liquid crystal generated in said outer area from being diffused into the thin film transistor array,” as recited in independent claim 6 of the present application. As such, Kabuto fails to remedy the deficient teachings of APA. With respect to dependent claims 8 and 9, Kabuto fails to teach or suggest a relationship “wherein the distance is in a range of equal to or greater than 1 mm and less than or equal to 1.5 mm,” as recited in dependent claim 8, and “wherein the distance is greater than 1.5 mm,” as recited in dependent claim 9.

Because Kabuto fails to remedy the deficient teachings of APA, one of ordinary skill in the art would not be motivated to modify APA by Kabuto to obtain an in-plane switching mode liquid crystal display device having the combined features recited in independent claim 6 and its dependent claims 8 and 9. Accordingly, claims 6, 8 and 9 are allowable over APA and Kabuto. Reconsideration and withdrawal of the rejection are requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue. If the Examiner deems that a telephone conversation would further the prosecution of this application, the Examiner is invited to call the undersigned at (202) 496-7500.

Application No.: 09/892,883

Docket No.: 8733.426.00-US

Amendment dated April 30, 2004

Reply to non-final Office Action dated January 30, 2004

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

Dated: April 30, 2004

Respectfully submitted,

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